DEPARTMENT of ENVIRONMENTAL SERVICES Water Division - Watershed Management Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: LEDGE POND	Lake Area (ha):	44.56
Town: SUNAPEE	Maximum depth (m):	5.2
County: Sullivan	Mean depth (m):	2.8
River Basin: Connecticut	Volume (m³):	1233000
Latitude: 43°25'55" N	Relative depth:	0.7
Longitude: 72°05'32" W	Shore configuration:	1.44
Elevation (ft): 1308	Areal water load (m/yr	
Shore length (m): 3400	Flushing rate (yr^{-1}) :	1.30
Watershed area (ha): 338.0	P retention coeff.:	0.72
<pre>% watershed ponded: 0.0</pre>	Lake type: natur	al w/dam

BIOLOGICAL:	16 January 2002	30 July 2001
DOM. PHYTOPLANKTON (% TOTAL) #1	ASTERIONELLA 75%	CHRYSOSPHAERELLA 65%
#2	DINOBRYON 12%	PERIDINIUM 10%
#3	PERIDINIUM 6%	MALLOMONAS 6%
PHYTOPLANKTON ABUNDANCE (units/mL)		
CHLOROPHYLL-A (µg/L)		1.45
DOM. ZOOPLANKTON (% TOTAL) #1	KERATELLA 44%	KERATELLA 37%
#2	CILIATE SPP 29%	ACANTHOCYSTIS 31%
#3	CALANOID COPEPOD 18%	CALANOID COPEPOD 16%
ROTIFERS/LITER	46	130
MICROCRUSTACEA/LITER	16	78
ZOOPLANKTON ABUNDANCE (#/L)	87	301
VASCULAR PLANT ABUNDANCE		Scat/Common
SECCHI DISK TRANSPARENCY (m)		4.5 Visible on bottom
BOTTOM DISSOLVED OXYGEN (mg/L)	13.5	8.4
BACTERIA (E. coli, #/100 ml) #1		< 1
#2		< 1
#3		

SUMMER THERMAL STRATIFICATION:

not stratified

Depth of thermocline (m): None Hypolimnion volume (m³): None Anoxic volume (m³): None

CHEMICAL:			LEDGE POI SUNAPEE	ND	
	16 Janua	ary 2002	30 .	July 2001	
DEPTH (m)	1.5	3.0	1.0		3.0
pH (units)	6.1	6.1	6.3		6.2
A.N.C. (Alkalinity)	1.8	1.6	1.1		1.1
NITRATE NITROGEN	< 0.05	0.05	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.30	0.30	0.20		0.30
TOTAL PHOSPHORUS	0.006	<0.005	0.006		0.00
CONDUCTIVITY (µmhos/cm)			16.5		15.7
APPARENT COLOR (cpu)	6	6	14		9
MAGNESIUM			0.27		
CALCIUM			1.2		
SODIUM			0.9		
POTASSIUM			< 0.40		
CHLORIDE	< 3	< 3	< 2		< 2
SULFATE	4	4	4		4
TN : TP	50		33		33
CALCITE SATURATION INDEX			4.9		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 2001

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	1	2	0	3	Oligo.

COMMENTS:

- 1. Previously surveyed in 1981; no change in trophic class and little change in water quality.
- 2. Gas motors are banned from this pond.
- 3. No public access; launched boat over private property with permission.
- 4. Good variety of net plankton present; 18 phytoplankton and 9 zooplankton genera observed.

FIELD DATA SHEET

LAKE: LEDGE POND DATE: 07/30/2001

TOWN: SUNAPEE

WEATHER: Warm, partly cloudy & breezy

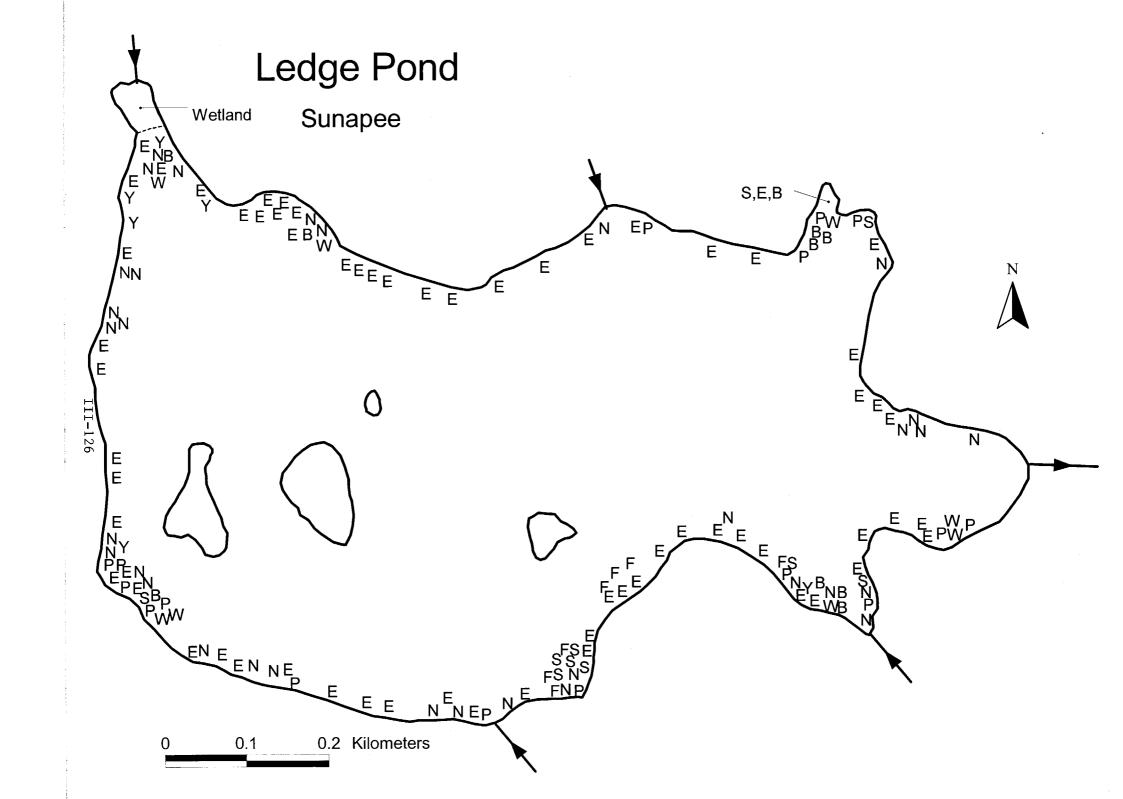
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DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
0.1	24.3	8.4	100 %
1.0	24.1	8.4	100 %
2.0	24.0	8.4	100 %
3.0	23.9	8.4	100 %
4.0	23.9	8.4	100 %
			"

SECCHI DISK (m): 4.5 VOB COMMENTS:

BOTTOM DEPTH (m): 4.5

TIME: 1220

*Dissolved oxygen values are in mg/L



AQUATIC PLANT SURVEY

LAK	E: LEDGE POND	TOWN: SUNAPEE DA	TE: 07/30/2001
Key	PLANT	NAME	ABUNDANCE
I.C.y	GENERIC	COMMON	ABUNDANCE
F	Nymphoides cordatum	Floating heart	Sparse
S	Sparganium	Bur reed	Sparse
E	Eriocaulon septangulare	Pipewort	Common
P	Pontederia cordata	Pickerelweed	Sparse
N	Nymphaea	White water lily	Scattered
Y	Nuphar	Yellow water lily	Sparse
W	Potamogeton	Pondweed	Scattered
В	Brasenia schreberi	Water shield	Scattered
L	Lobelia dortmanna	Water lobelia	Sparse
			
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OVERALL ABUNDANCE: Scat/Common

GENERAL OBSERVATIONS:

- 1. Bladderwort was not observed during the plant survey but came up on the anchor at the deep spot. It is likely over much of the bottom. It is not depicted on the map.
- 2. Two loons were observed.
- 3. Pipewort and white lilies were common around the islands but are not depicted on the plant map.
- 4. Clumps of filamentous algae were observed on the bottom in various places but are not depicted on the plant map.